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MAXIMS BY A MAN OF THE WORLD.

THE PROFESSIONS.

It is curious enough that although our upper classes permit their male offspring to follow for years an expensive course of education, which prepares them for no subsequent line of life whatever, they attach a great importance to the choice of a profession in early life.

'My boy,' says one fond parent, with an air of self-sacrifice, 'is wild to be a soldier, and although it will break his mother's heart to let him go, I suppose I must.'

'But my case,' answers a sympathising mother, 'is much worse; for my boy is wild to go to sea.'

Stripped of romance, the predilection of youth for the military and naval professions chiefly lies in the idea that they will demand less study, fewer of those abhorred 'lessons' that, under whatever name you call them, will probably be unsavoury to the nostrils of boyhood, but which (as I have endeavoured to shew in a previous paper) we contrive to make as hateful to them as we can. They are 'wild' (poor little fellows) to escape from Greek grammar, even if it were on board ship; 'anywhere, anywhere out of the'—school. This passion for the sea, in particular, is supposed to have something of a divine instinct about it, which it would be sacrilegious to check; yet in the case of the merry Swiss boy 'wild' for the marine service of his native country, he would have to get 'tame,' I conclude.

The fact is, ninety-nine boys out of a hundred are just as fit to be trained to one profession as another; and the hundredth will take his own line, no matter what you train him for. One parent flatters himself (and especially herself) that their own Tom is different from all the other Toms in the country, or their Terrace (if they live in town), and has an idiosyncrasy; whereas he is (almost) as likely to have feathers instead of hair. In the following remarks concerning the Professions, I have ventured to take as groundwork for reflection not your Tom, my good Pater and Mater

familias, but the Tom from next door—the Ordinary Boy.

Let us first consider, then—*place aux dames*—'the Church' as a calling. I mean no disrespect to clergymen by that foreign phrase; but *imprimis* (as I have confessed) I know very little French, and am pleased to use it; and secondly, the association of ideas between Ladies and the Clergy is overpoweringly strong. It is a pity that it is so; it is much to be regretted that the 'white throats' (as a naturalist of my acquaintance calls them) should so assiduously have cultivated the good opinion of the gentler sex, and made us males so jealous by their neglect. When I happen upon a divine (and I am thankful to say I know several such) who meets me in argument, in outspoken opinion, in bold candour, *like a man*, he seems to me, by contrast with his 'snowy-banded, delicate-handed, dilettanti' brethren, a Hercules of debate. I wish the clergy well. I believe mainly (though that is of small consequence to the reader) in what they believe in. I think they do more good than any other professional class (save one) in the country; the majority of them are gentlemen, in the finer sense; the ridicule that is cast upon their honest work by would-be wits and very genuine ruffians, is hateful to me. But they commit the fatal fault of endeavouring to utilise that which can never be useful to any cause—prejudice, ignorance, unreasoning sentiment. Is it such a great triumph to so confuse the ideas of many nice old ladies as to make them dissatisfied even with Paradise, if it should not afford a 'sweet preacher' and an ecclesiastical edifice with sittings? They live (most of them) so out of the world of men, that they know nothing of those whom it is surely as much their mission to edify as the other sex. I go to church, and hear denunciations of the Infidel—not present; eulogiums upon those who will 'swallow formulas'—as Mr Carlyle used to say before he began to flatter the genteel female. They know their congregations have an immense capacity for deglutition of this sort, and they work the vein in what to me, I confess, appears quite a shameless manner. They cannot fail to know what sort of sins

the folk who take pews by the year are inclined to, and what are those they have no mind to; yet they are for ever (I use the word in a Hudibrastic sense) damning the wrong people—those who do not come to listen to them. A natural proceeding, it is true, but not one which (all things considered) does them credit. Suppose the chaplain of the Blind Asylum (he has written a very capital book about his flock, and I am sure would do nothing so injudicious) should confine his spiritual denunciations solely against those persons who had the gift of sight and practised it; restricted himself to Hudibrastically treating eyes! The thing has come to that pass indeed that the hundredth Boy—the really exceptional Tom—might ask himself whether he should embrace a profession the entrance into which would place him at once in antagonism with almost all persons of intelligence of his own sex. Let him answer 'Yes,' and join that scanty but sacred few, whom *all* respect, and those whose fealty is most worth having, love and honour. There is something womanly about them—a tenderness, a living faith for poor humanity, a divine pity—very different from the clerical effeminacy of which I have spoken; but with that gentleness they have the power also which has the force to Save.

However, to our muttons and the golden fleece. The shepherd (even a good one) must shear the flock as well as tend it. Let us consider the calling of a clergyman from a stand-point more suitable for a Man of the World to take. It is always said that 'the church is a wretched profession unless one has some ecclesiastical influence'—that is, unless there is a family living in prospect, or one's uncle is a bishop. 'A curate is less well paid than a butler in a respectable family, and yet has to support the position of a gentleman;' &c. Much of this reasoning, though specious, is fallacious. In the first place, it is something (even in a pecuniary point of view) that the fact of being a clergyman does insure this 'position of a gentleman.' Nobody inquires whether a curate's father is a baker or a candlestick-maker, except, indeed, the papa of the young lady whose affections he may have gained, and then it is probably too late to make objections. That process which is called at college 'japanning,' and elsewhere 'taking orders,' confers a social station not subject to question. You may endeavour to be an attorney (and even accomplish your object) without acquiring this; but the mere 'reading for orders,' or 'being intended for the church,' has a flavour of gentility very pleasing to the tradesman who wishes his son to cut the shop, but has not the fortune to enable him to do so on the grand scale. Directly you get your country curacy (which is generally taken at first in preference to one in a town), you are free of at least all the tea-tables in the county; and you are asked *once* to dinner, even by the lord of the manor, unless he happen to be one of those few noblemen whose mode of domestic life is such that a clergyman must avoid his table. It is to this early patronising that much of the aristocratic leaning of the clergy is doubtless due—a misfortune perhaps, as respects their future usefulness, but certainly a very natural consequence of their position. The Patron has livings as well as gracious hospitalities to bestow. 'What are curates' hopes?' asks a recent riddle; and the answer in a double sense is 'Forlorn.*' But before

they can be bishops, it is necessary, or certainly usual, to be Rectors. True, their chances are not great; but still they find themselves, at three-and-twenty or so, in a position which their father's son could not have otherwise obtained at double that age, and with an *income of a hundred a year*. 'Very small,' it is said; but I should like to know in what other profession do young men of twenty-three earn for themselves so much? Nay, what other profession does not *cost* them at least that sum for years to pursue it; and often without subsequent repayment! Remember, I am speaking solely of the ordinary Tom. The benefits of a *certain* income, however small, to him are unspeakable; for not only will he never be Lord Chancellor, nor even Sergeant-surgeon to the Queen (whatever that is), nor Field-marshal, nor Head Commissioner of Police, but it is probable he will not make his fortune in any line. It is therefore of great moment to him to secure early a sure and permanent wage.

Similarly, a most unmerited contempt is expressed by Tom's friends for a government clerkship. The position it confers is certainly inferior to that derived from a curacy; but its income, however slowly, steadily increases; and there is even a rumour that assiduity and diligence have, now a days, been rewarded (if only in one or two instances) in a manner as gratifying as unexpected to the recipient. Let it never be forgotten, that although Tom may be 'ordinary,' diligence and assiduity are *not* ordinary, or, at least, to be found in every room of a Public Office. And if a government clerkship does not 'lead to much,' the days are coming, Tom, when no trade—not even that elegant calling of the diplomatic service into which you can still be smuggled by good-favour—will lead to much to those whose work does not really deserve high pay.

The Bar is not a good profession for Tom at all. There are, it is true, some persons exceedingly like owls to you, reader, as you meet them proasing and blinking in the glare of society, who are successful as consulting barristers, or even in court with wig and gown, but then they have a natural aptitude for certain dry and intricate matters quite out of the ordinary ken. As a general rule, dull men get on worse at the Bar than in almost any other walk of life. It is the only calling wherein some spend all their lives and yet never earn so much as the rent of their rooms—which, by the way, is always ridiculously high. Even marriage with an attorney's only daughter will but procure you a few briefs, unless you have considerable talent for improving an opportunity; while the dismal waiting and watching for the opportunities that do *not* come, is enough to thin the stoutest. I do not know at what age the ambition to 'get on in his profession' leaves a man; but I know men of five-and-forty who wear wigs and stuff-gowns in July, and perpetually hang about those wretched little law-courts at Lincoln's Inn, to the great detriment of their health (as I should suppose), yet with about as much chance of getting 'business' as a bedmaker. They like loafing about there, perhaps, listening to old So-and-so's judgment, or discussing the last new scandal about the Chancellor; but, for my part, I would as soon be the keeper of the Monument, who sees others go up and up all his life long, but who is content enough to stop where he is below, and skin and eat walnuts. Yet, for pleasant society, it must be confessed that the Bar is the most agreeable of all the (recognised)

* Or, 'For Lawn, my good sir.'

professions; there is more wit to be found there—although too much of it is in the shape of 'good stories,' sometimes a little long, about the judges—and certainly more good sense in matters of opinion; albeit your barrister is prone to cynicism, and to express lower views of other men's motives than he really entertains, or than those which actuate himself. The fact is, although audacious enough against authority, he is exceedingly sensitive to ridicule.

The branch of the law which will suit Tom best, supposing any opening presents itself in any established firm, is without doubt that one the members of which wear their own hair, and are gentlemen by act of parliament. He should be an attorney. It is a calling expressly invented for the encouragement of dulness. It is impossible for a layman, who merely employs you to do his business for him, to find out what a fool you are. The most acute intellect, unless it chance to also have some attributes of the owl aforesaid, brought face to face, for the first time, with any legal document for the conveyance of house or land, must needs be baffled; it requires the patience of Job to wade through that jungle of verbiage, that 'damnable iteration' (it is Falstaff speaks), that useless and unnatural collocation of terms—all written in an unknown hand upon sheep-skin. The idea of the rascal Wolf pretending that he can't write except on sheep-skin, because it is the only stuff that lasts—not at all because he charges by the folio! Perhaps for Magna Charta it was well enough; but paper and print will soon be found sufficiently durable (unless I am very much mistaken) for all ordinary legal purposes. My good Tom, this gigantic system of imposture may last your time, and therefore be you an attorney; but danger is drawing nigh to all these shibboleths, beginning with 'Know all men by these presents; lawyers will at no distant date be compelled to write plain English, and in words 'understood of the people' who have to sign their names at the bottom; perhaps there will not even be a wafer left to rest one's finger upon, as we utter those awful words: 'I deliver this as my act and deed.' The word 'act' may even be held sufficient. The opponents of that Democratic rule which is coming as surely (and almost as swiftly) as to-morrow's sun, aver that it is the enemy of law; and it is certain that it is opposed to law *forms*, for the unintelligibility of which no good reason can be shewn. What? Have we sacrificed our grocers on the altar of common-sense, and yet shall we spare our attorneys? I trow not.

The Army. This is a tempting calling for the young. It demands, certainly, a little study; it offers constant boon-companionship; it supplies you (not, however, *gratis*) with a very becoming uniform; its professors are the idols of the young ladies. But, somehow, as the lieutenant becomes a captain (or does not become, which is twenty times worse), and there is no chance of foreign service, the love of his calling too often changes to indifference. The fact is, it is dull work, that routine of barrack-life, and exposed to coarse and hurtful temptation. There are few humanising influences; domesticity, of course, is very rare: and, indeed, the woman who weds a man in a marching-regiment is bold enough to be a soldier herself. At the same time, there are many officers (and their number is increasing) who, not confining themselves to pipe-clay, make the comfort of their men their study; and if Tom

has the good-feeling and the moral pluck to put his hand to that work, there is no more noble and rational calling for him than the military one. The purchase of a commission is not a good investment, in a commercial point of view; but, like the taking Orders, it confers some incidental advantages which have a practical value. Your uniform may dazzle an heiress. You are certainly not over-worked, and you are very well fed, the number of subscribers insuring a good table at a small outlay. Mess, perhaps, to the outsider may seem a little tiresome; but it must be surely pleasant to see around you your old fellow-comrades wherever you move: at least, I can imagine few things more agreeable than a locomotive college. But a combination-room has this advantage, that you can express in it any views you may chance to entertain; whereas a mess-room, while lax enough about some things, is the very sanctuary of prejudice in matters of opinion. Perhaps a regiment, being a sort of Machine, regulated by authority, requires all its cogs and wheels to fit easily and work exactly together, and resents the intrusion of any foreign body (even if it be an idea) as though it were a Frenchman; doubtless, too, from the centurion habit of saying 'Go, and thou Goest,' and the ready obedience that is paid thereto, not only is independence of thought discouraged, but the sense of Justice is by no means nice. A wrong at which even fashionable civilians grow indignant, and vulgar but healthy Public Opinion denounces as 'an infernal shame,' will often fail to excite any such feeling at the mess-table. However, to very many persons, and probably to Tom, this last consideration is a small matter. The military, like the Civil Service, insures, if not a competency, a certain income, which may, at the worst, be made to suffice; and if what other folks call the Horrors of War should take place, there will be chances for Tom such as will be offered to him in no other profession, not even in trade. In the latter case, he may appear in the *Gazette* to his ruin; whereas, if in the army such an incident should happen, it will lead him to such a pinnacle of fortune that he may die a K.C.B.

Upon the Navy, these Maxims must be silent. 'There are no (sea) serpents in this island.' I know nothing of the naval profession, and have therefore nothing to say, except to express my fervent hope that the gallant defenders of my country's seaboard are not so sick when they are afloat as I am.

Doctors. Healers of the sick, gratuitous ministers of the poor! I lift my hat to you with sincere respect and approbation. When I said, a while ago, that there was one calling which conferred even greater benefits on humanity than the clergy, it was to yours that I referred. There are, doubtless, Quacks, Charlatans, Money-grubbers of a vile sort, even among your honourable body, as elsewhere; you tell me so yourselves, indeed (for you abuse one another, as though you were all Irish, and are the most jealous set of people under the sun); but, for my part, I have seen few specimens of your calling otherwise than generous and kindly hearted; your good deeds, within my own personal knowledge (although oftentimes you do not know it, for you do them by stealth), are as many as are the hairs of my head—and I am not yet very bald. There is another most admirable quality about you: you have always something to say that has an interest; this is not only because you are conversant with

diseases such as are incident to all of us (although *that* is something, for there are few things one likes to talk of so much as our own present or probable maladies), but from your opportunities of observing Human Nature on occasions when it is necessarily frank, you have always extracts with which to favour us out of that delightful book. An enemy of yours (but of everybody's), and a great wit, once observed to me that doctors, considered as conversable companions, were 'like cheroots. You never get a very good one, but you never get a very bad one.' I allow the latter part of his verdict, though not the former. For a chance-companion, give me a doctor; and of the two divisions of the calling, let it be a surgeon. So long as you can keep him off the subject of that impostor So-and-so (another scientific gentleman, who has more aristocratic patients than he has), his talk is excellent. I don't refer merely to his creepy, crawly stories of blood and bones (although I am passionately fond of *them*), but to the incidental portions of his narratives, so characteristic and illustrative of the great family of Man. I have heard that the plots of many of the most interesting novels of the present day are suggested to the authors by their medical attendants. If it be so, this only adds another item to the long list of obligations which we owe to the Faculty. I have always done what I could for them (short of remunerating them as their services have deserved) all my life. I have never hesitated to express my contempt for homoeopathy, in which, if a man believes, he will believe in anything. At the same time, it must be confessed that if those infinitesimal globules do no good ('You might just as well'—But no; I dare not quote my dear friend Allopath's too forcible remark), they are at least tasteless; and why, O why, are Allopath's drugs so filthy and detestable? After four thousand years of medical science, a black dose is just as abominable as it was to Noah in the Ark: I say Noah, because the want of exercise probably made him (or, at all events, some members of the family) bilious. Now, how is this, gentlemen of the Faculty? Why have your pills that unspeakably sickening smell about them, which causes a shiver in my spinal marrow? Why is castor-oil permitted to exist in its present demoniacal condition? You don't take these things yourselves, I suppose: indeed, I know you don't. You take nothing that is good for you—or which you say is good for *me*; and you commit more imprudent acts in the way of eating and drinking than any people I meet. *This* indeed may be in the hope that your example may lead us to become your patients; but there is no such excuse for the hatefulness of your drugs. The permanency of the nuisance shakes my faith in your scientific abilities; you can cure evil smells by disinfectants, then why not evil tastes? I do hope that after the publication of this friendly protest, you will remove this blot upon your reputation.

The receipts of a doctor being (in the main) in proportion to his abilities, I cannot hopefully recommend the calling to honest Tom. It affords the largest incomes (except the law) of any of the professions, but also (except the law) exhibits specimens of the smallest. Some country practitioners (to judge by their parochial salaries) push Science to its utmost limits in their endeavours to live upon air. If a few M.D.s and F.R.C.S.s ride in chariots and are made baronets, there are many who, for very hard work, receive very small pay;

and both rich and poor often give their time and skill to those who cannot afford to purchase it. It is no wonder to those who know doctors best, that the Good Physician should have been taken as the highest type of Humanity.

The time has not yet quite come, although the signs of its advent are numerous, for the social gulf between the Professions and Commercial Pursuits to be bridged over. But many a young man of family and connections regrets that his parents had not been a little less genteel in their views of his future; especially regrets that two thousand pounds were spent upon his first-class education, when two hundred would have secured him a better one, and the remainder have gone to help to purchase for him a share in some thriving business in the City. I am not myself a believer in the popular creed which ascribes to 'men of business' a peculiar sagacity and discernment. With our railways and joint-stock banks in the condition in which we see them, it is impossible to credit the persons who have brought them to that pass with any mental endowments of the sort. If they have managed matters themselves, or have been the victims of knaves (as they assert), their intelligence is equally contemptible. But, putting aside any such unfounded claims, Commerce is a grand calling, and those who despise it are very weak folks indeed. It seems to me, that to be one of the two heads of some active firm (no matter how small its operations, if they be only growing), and *where your copartner is also your friend* (an essential point), is to pursue one of the pleasantest of crafts. Is it not the entering into a commercial marriage, so that your hopes and fears, your good-fortune and your failures, are always shared and sympathised with, and where your plans and projects are your common children? That must surely be very nice—when it happens; but sometimes, I remark, there are divorces—dissolutions of partnership—through incompatibility of temper, I presume, since there can be no co-respondents in such cases save that which is spelt with two *rs*.*

There is one profession which, although scarcely recognised, embraces all the others—Literature. 'Soldiers, sailors, tinkers, tailors, gentlemen, apothecaries, ploughboys, thieves' (even), all belong to that now. Parsons write as much as they preach (and, I must say, better): barristers are great scribblers: so are government officials—indeed the post-office (perhaps through its association with Letters) is a most prolific mother of modern writers. Something, therefore, must be said here about Literature, although it does not concern Tom in the least. (It is not possible for poor ordinary Tom to make ten pounds a year at it. A few popular writers, indeed, are said to be great fools—but that is not being ordinary people.) But, you see, I am what is called 'a gentleman connected with literature' myself, and the subject is delicate. Not that literary folks are sensitive at all: O dear, no: nor jealous of each other's successes. It's all rose-colour—this calling of authorship—it is really. Generally speaking, we love one another; although, of course, we have our prejudices. We are not rich—not one of us. The greatest geniuses among us, to whom the world will be grateful for generations

* Correspondence, Tom; 'I am in receipt of your esteemed favour,' and that sort of jargon; which, by the by, is absurd, and reminds one of the shibboleths of the law.

to come, do not make so much *per annum* as many a parliamentary barrister whose place, if he died to-morrow, could be supplied by his fac-simile. But Literature is a better trade, even in this respect, than it *has* been, and some day (when American publishers permit) it will be duly remunerated. In the meantime, if we have not wealth, we have something. We can spend our lives where we will. If any literary gentleman's genius is so erratic as to cause him to prefer the country to London, he may go to Jericho—no, *not* to Jericho, because of the uncertainty of the book and manuscript post, but to Coventry, if he likes, and live *there*. And wherever he lives, he may do pretty much as he pleases. Society, so exacting with all other callings, is lenient to this one. She does not impose obligations upon him—to keep a page, or to rent a pew. He is treated by her with much the same sort of favour as Idiots are among the North American Indians. The Great spirit has put a bee in his bonnet, and they not only forbear to criticise, but regard him with considerable approbation. I wish the gentlemen who write reviews would do the same. They are the thorns in the rose-bush of literature. The young author—I say the 'young' one, because, as we grow old, kindly Nature enwraps us with a hide similar to that of the rhinoceros, and besides, we are more or less 'established,' so that the darts of criticism have less power to assail our position—the young author regards the critic exactly as a barrister regards an attorney—he despises him from the bottom of his soul, but pays him the most respectful court. The general public is, of course, the author's real client, but he cannot approach *him* (in the first instance) save through the intervention of this third party; hence his hypocritical self-humiliation. Another foe, by the by, of the author, if he be a novelist at least, is the Divine. As there is nothing which a professional actor hates more than an amateur, so there is no class of person whom the clergyman regards with such animosity as the lay-preacher; the uncommissioned, unauthorised fellow, who, under pretence of writing a story, endeavours to inculcate his own views and opinions. But then the author and the parson are not brought much into connection with one another, whereas the author and the critic are. The latter has the enormous advantage of putting into print the very low opinion he entertains of the former's talents; the former has to keep *his* opinion to himself, or rather (for he *does* express it) to restrict it to the circle of his private friends. Some authors are very bitter; but for *my* part—although I would scorn to utter one syllable of flattery to gain the applause of all the newspapers in the three kingdoms—I know no critical organs which I do not reverence and admire for their sterling honesty and excellent taste. What a kindly appreciation of merit (even in an unknown writer); what a tender regard for personal feeling combined with the strictest sense of literary justice; what a careful culling of the beauties of the work in hand, to present them in the most favourable form to public view; and what an avoidance of the temptation to be merely smart at the poor devil's expense! This, at least, is what I have always found myself enabled to say with respect to *my* critics—with the exception (which proves the rule) of one or two whom I may dismiss with the observation that they are contemptible and malignant idiots.

Among authors, there are still one or two lineal descendants of Richard Savage and his like, unprincipled, untrustworthy scamps, and also a few 'feckless' persons to whom we owe it that the old opinion of men of letters being thoughtless and improvident is not quite exploded; but upon the whole, we are prosperous and respectable enough to be church-wardens. If my life were to be lived again, I would wish to join no other than that pleasant brotherhood of which I have been, these now so many years, a humble and unworthy, but still, I hope, a faithful member. O able, willing hands, long dust, that were stretched out to aid me; O great, true hearts, long cold, that spoke to me, through favouring lips, the words of hope; I would my thanks could reach you in the grave! And you, and you, the living—the men who tower above such as I, as trees above the shrubs—how much I owe you, and how much I love you—Friends.

CHARLEY'S BET.

'He shall never have a penny,' stormed Uncle Bunce; 'I will cut him off with a shilling.'

'My dear Bunce,' said I, 'you have already contradicted yourself, in first denying him a penny, and then promising him twelve. I never heard you contradict yourself (although often other people) except when in a passion, and that is not the frame of mind in which to sit down to alter your will.'

'Mind your own business, sir, and leave me to manage mine,' was the prompt and severe rejoinder.

'Your business is mine, Nicholas,' continued I quietly, 'since we are partners. We have been friends, boy and man, for these forty years, and I am not going to permit you to quarrel with me.'

'Who wants to quarrel?' said Uncle Bunce peevishly.

'Well, I don't; but I would rather even that should happen, than that my old friend should do himself such an injustice as to condemn a young fellow, who has no other relation in the world, unheard: your own sister's son, George! I am ashamed of you!'

'Unheard? Pack of nonsense,' sputtered the old fellow. 'The thing's as plain as the nose on your face.'

'Thank you,' said I. 'However, you may say as offensive things as you please about my nose, only, don't be unjust to Charley.'

'I am not unjust. The facts are these. I had adopted that boy, and meant to treat him as my own son. He has disgraced himself by betting on a public race-course a sum he had no honest means of paying if he lost—a gambler, sir, and a cheat, that's what he's proved himself; and I'll have nothing more to do with him.'

'You had better inquire into the matter a little further, Mr Bunce,' said I with some distinctness of manner; for I liked Charley upon his own account, as well as because he was the only relative of my friend and partner, one of the most sound-hearted and grossly prejudiced men within a mile of the Royal Exchange.

'There is nothing to be inquired about, Mr Coe. Even if my late nephew' [It was just like what his flatterers called his 'stern determination,' to use that phrase; just like his 'infernal obstinacy,' I say]—'yes, sir, even if my late nephew had had the fifty pounds to pay, which I am sure he had

not, I would disinherit him for betting it; and even if he didn't bet, he was on the race-course, and that is a place no nephew of mine should shew his face and remain my heir.—There is a letter from our Vienna correspondent, which requires your immediate attention, Mr Coe.' And with that, Uncle Bunce withdrew himself into the glass-case that is his peculiar sanctum at our office, and slammed the door behind him.

Our firm was Bunce and Coe, and there had been no other member of it, save us two, for five-and-twenty years. We were no relatives (though perhaps not less fast friends upon that account), but I called him Uncle Bunce because Charley did, who, until that unlucky Derby-day, had been as great a favourite of his as of mine; and here were the young fellow's prospects blighted, and the old man's affections left without any human trellis-work to cling to, all because some ill-natured busy-body, who knew Nicholas Bunce's hatred of the turf, had told him that Charley Thornton had bet fifty pounds to ten against *Palmyra* for the Derby, on Epsom Downs.

I had no greater love for Racing, nor perhaps for Charley, than Nicholas had, but I could make a little more allowance for the follies of youth; and when I found myself crossed, or even disobeyed, all the milk of human kindness within me did not instantly turn sour, as it had done in Uncle Bunce's dairy, with the sad effect I have described. He had gone straight to Charley upon the information received, and said: 'Did you go down to Epsom Downs, sir, and bet fifty pounds to ten pounds against a race-horse? Answer me, "Yes," or "No." And Charley—for the boy could not have told a lie if he had tried—had answered: 'Yes, Uncle;' and there the matter had ended.

So, now, being well convinced that Uncle Bunce was as inflexible as the iron in which we dealt in his resolve to make no further inquiry into the matter, I determined to make it myself, for both their sakes. I was not very hopeful as to the result of the investigation, but still I thought there might be some mitigating circumstances—for the fact as it stood looked blacker, it seemed to me, than it ought to do, from what I knew of the young fellow. He was not the sort of lad to leave his duties (he was a clerk in a government office) for a scene which he knew was especially distasteful to his uncle and guardian, and there risk upon a single event a sum that was equal to a third of his whole income. Uncle Bunce and I, it was true, perilled a great deal more than that proportion of our property in 'operations' in iron, but that was all in the way of business, and it was upon business habits that the old gentleman prided himself, and for which he looked, first of all, in others. That Charley should have shirked his work at the Sword and Gun Office for a day's pleasure, was a sin of itself almost inexpiable in his uncle's eyes; but that he should have spent that day on a race-course, and there betted fifty pounds—the more I looked at the whole matter, in fact, the worse it appeared for my young friend and client, and the less did I wonder at the lines upon Uncle Bunce's forehead as he sat in his cucumber-frame—but by no means as cool as a cucumber—and snapped the clerks up so sharp that they trembled to approach his den.

When he left the office for the day, as he was accustomed to do an hour or so before me, his

junior, I did venture to remark: 'Come, Bunce, you will at least not be in a hurry about this matter of poor Charley; perhaps I may have to tell you something about it to-morrow which may cause you to think differently of him.'

'You mean well, Coe, and I thank you,' said he gravely. 'But I shall see my lawyer to-night, and give him such instructions as will, at all events, prevent my property falling, after my decease, into the hands of the betting-ring.'

Stern I had often seen Nicholas Bunce, but bitter never. I was glad to see him bitter, for it was proof that he had been wounded sore, and unless he had dearly loved the lad, Charley's conduct would not have had the power so to wound him. Now, where there has once been Love, there is always room for Reconciliation; and as soon as Uncle Bunce was round the corner, I took a Hansom to the Sword and Gun Office.

It had been arranged long ago that on the next evening my partner and I should dine together at the former's house; and we did so. At one time, Charley had been asked, but that was all over now, of course. Uncle Bunce had not come to the city that day, and it was evident, by his wearied and melancholy manner, that he had been occupied in something distressing and disagreeable; indeed, I have no doubt that he had been remaking his will. I was not one whit afraid of the old gentleman, but I was resolved to put a good face upon the matter. 'Your good health, Nicholas,' said I, as he pushed the claret to me after dinner, 'and Charley's good health.'

Uncle Bunce started as if he had been stung.

'I do not wish to have that young man's name mentioned in my hearing,' observed he.

'After to-night, you shall not hear it, unless you please,' said I; 'but I must have my say for this once. I told you I should do so, yesterday, and I promised him the same, last night. Then I shall have discharged my conscience; and if you choose to let your nephew go to the dogs, it will be through no omission of mine. I have neither extenuation nor apology to make for him.'

'I should think not,' interpolated Uncle Bunce.

'Your thought is founded, however, upon wrong premises, Nicholas. I have neither to make for him, simply because he needs none.'

'Needs none!' echoed the old man, and although his tone was meant to be contemptuous, I thought I detected in it an accent of hope.

'I mean what I assert, old friend,' replied I quietly. 'The lad has behaved, I will not say "as any other young man would have behaved in the like circumstances," for that phrase is often used to excuse an indiscretion, but I will say *this*, and then have done with it: He has behaved as a true gentleman, and (especially) as a good man of business, in the whole matter.' I held up the wine-glass between my eye and the light, and smacked my lips like one who, having relieved his mind, may now afford to enjoy himself.

Uncle Bunce seemed to gasp for air. 'What the deuce—why, you're making a fool of me,' exclaimed he savagely. 'Do you mean to tell me he did not go down to the Derby?'

'Of course he did. The government sent him.'

'The—government—sent—him!' repeated my respected partner like one in a dream.

'Just so,' said I. 'But don't let me trouble you with the particulars of a subject which I see is distasteful to you, and about which you have quite

made up your mind. I have now performed my duty in the matter, and there's an end of it.—This is good wine. If it's no secret, may I ask what did you give for it, a dozen?

'Fifty pounds. Fifty pounds to ten against *Palmyra*,' muttered the old man. Then: 'It's all a lie, Coe,' cried he suddenly. 'How dare you talk to me about the government sending?—'

'Mr Bunce,' interrupted I firmly, 'I will not endure such language. You may be as brutal and unjust as you please to your own flesh and blood, but you shall not bully me. I am not in the habit of telling lies. The fact is this (if you really wish to hear the fact, and not merely to flatter your own preconceived opinions), Charley Thornton could not have avoided—— But stop; first answer me one thing. If Messrs Bar and Bullion had offered you a holiday on the Derby-day, when you were a clerk in their office, upon the condition that you would go and see the Race, would you have accepted it, or would you not?'

'Well, I suppose I should,' said Uncle Bunce reluctantly.

'No, you don't; you are sure you would; you'd have gone like a shot. Well, that being granted, you and your nephew are in the same boat. The government gave a holiday on the Derby-day to the clerks in the Sword and Gun Office, upon the condition I have mentioned, and all those who availed themselves of the offer pledged their words to use the opportunity as it was intended to be used. If Charley, having obtained his day's leave, had not gone to Epsom Downs, he would have behaved unlike a gentleman. That's clear, I hope.'

'The Government ought to be ashamed of themselves!' observed Uncle Bunce.

'Very likely: but your nephew is not the government, and although I hear from the chief of his department a most excellent account of the young fellow, it is not likely he ever will be. Thus, you see, to begin with, so far from shirking his duties to go to the Derby, Charley only obeyed orders—and I have no doubt with great cheerfulness. This is certainly excellent wine.'

'Did the government make him bet fifty pounds to ten pounds against *Palmyra*?' inquired the old gentleman grimly after a long silence.

'The government didn't, but the Office did,' said I; 'in this way. There was a Derby sweep got up among the Sword and Gun clerks, as is always the case at every government-office; and Charley put in his sovereign like the rest. Perhaps that was wrong of him: but if you never did worse, friend Nicholas, when you were a young man, all I can say is, you were too good to live, and I shouldn't fancy you were ever likely to die of that complaint.' I rose, and going to the window that looked out into the quiet street, threw it up, to let in the summer air. 'Come, come; you'll forgive his putting into the sweep,' said I. 'I don't ask you to be generous, but to be just.'

'I forgive him that, of course, but for the bet I will not forgive him. How is it possible that the office could have had anything to do with his making a bet which, if he had lost, he could never pay?'

'He won it,' said I quietly; 'and it would have been a most unbusiness-like transaction if he had not laid the money. Yes, Mr Bunce; you have been wrong throughout this matter hitherto, and you are wrong now. I say, that Charley would have shewn himself unworthy of being your relative if he had

not laid the odds against *Palmyra*: and I'll prove it. The case was simply this: Charley drew *Palmyra* in this sovereign sweep, so that, if the mare had won, he would have received (since almost all the clerks subscribed to it) at least one hundred pounds. His obvious duty, then, as a man of business—and not a merely gambling speculator—was to make some portion of the money safe. He therefore betted fifty pounds to ten pounds against the mare; if she had won, he would have cleared fifty pounds by the transaction; and as it was, although she lost, the astute young fellow managed to secure ten pounds, minus the sovereign originally invested.'

'Ah, that was it, was it?' said Uncle Bunce, looking, I must say, most uncommonly foolish. 'However, you must confess that appearances were much against the lad.'

'Not a bit,' said I. 'On the contrary, they are very much in his favour. Come to the window here, and judge for yourself: there he is, at the corner yonder, waiting for me to whistle for him. Does he look like one of your cunning hang-dog Turfites—such as you have pictured him, or likely to grow into any such horrid shape? Unless he happens to draw a favourite in a sweep a second time—which is not very likely—I will answer for him that he will never make a bet in his life again. Come, sir, you whistle for him;' and Uncle Bunce did whistle, as cheerfully as any black-bird; and as the young fellow ran up, he held his hand out through the open window, to let him know at once that all was explained and forgiven. And then he came indoors, and something which I had caused to be privately kept hot for him down-stairs—for Uncle Bunce's cook loved the lad—was brought up by way of dinner, and Uncle Bunce and I, and Charley, had a merry evening together after all.

COMETS OF SHORT PERIOD.

It is related by Apollonius the Myndian, that the Chaldean astronomers held comets to be bodies which travel in extended orbits around the solar system. 'The Chaldeans spoke of comets,' he says, 'as of travellers, penetrating far into the upper celestial spaces.' He adds, that those ancient astronomers were even able to predict the return of comets. How far it may be safe to accept the statements of Apollonius, is uncertain. He ascribed other powers to the Chaldeans, of which we may fairly doubt their possession—for instance, the power of predicting earthquakes and floods. In fact, there is so marked a disposition among ancient writers to exaggerate the acquisitions of Chaldean astronomers, that it becomes extremely difficult to distinguish truth from falsehood. Still, there is sufficient evidence of their skill and patience as observers, to render it fully possible that they may have discovered the periodicity of one or two comets.

But, until the rise of modern astronomy, the opinion which was almost universally held respecting comets was that of Aristotle, that they are of the same nature as meteors or shooting-stars, existing either in the air not far above the clouds, or certainly far below the moon.

The discovery of the periodicity of Halley's comet following quickly on Newton's announcement of the law of gravitation, led astronomers to examine the orbits of all the comets which became visible, with the hope of finding that some of these

bodies may be travelling in re-entering paths. But, inasmuch as none of the brilliant comets of whose appearance records had been preserved seemed to have ever revisited the earth save Halley's alone, while even Halley's travelled in an orbit of enormous extent, an orbit which reached out in space more than three times as far as the orbit of the most distant known planet, astronomers held that the only kind of path which they might expect a comet to travel in was a long oval. They accordingly confined their calculations, and limited the invention of new mathematical processes, to the case of very eccentric orbits.

But, in 1770, a comet appeared which led astronomers to form wholly new views. No orbit which could be devised (subject to the above-mentioned condition) could be reconciled with the motions of the new arrival. At length the astronomer Lexell discovered that the path of the comet was not an oval of extreme eccentricity, but an ellipse of such a figure that the comet's period of revolution was less than six years. But here a difficulty arose. The comet was sufficiently conspicuous; and it was asked, how could such an object have gone on circulating so rapidly around the sun, and yet have remained undiscovered? A very singular result rewarded the inquiry into this question. It was found that the aphelion of the comet's path lay just outside the orbit of Jupiter; and, further, that when the comet was last in aphelion, Jupiter was quite close to it. Thus it became clear that the comet had been travelling in another, and doubtless much wider orbit, when its motions had brought it into the neighbourhood of the planet Jupiter—the giant of the solar system. The comet had actually approached the planet nearer than his fourth satellite. 'It had intruded,' says Sir J. Herschel, 'an uninvited member into his family circle.'

The result of this close appulse may be readily conceived. Just as Halley's comet, when close to the sun, sweeps rapidly round him—that is, in a sharply curved path—so the new comet's path was sharply bent around the temporary focus formed by the great planet. But just as Halley's comet, after perihelion passage, moves away from the sun, so Lexell's comet, after what may be termed perijovian passage, moved away from Jupiter, and passed again within the sun's attraction. From this time the comet began to follow a new orbit around the sun. This new orbit was an oval of moderate eccentricity, round which the comet travelled in about five and a half years.

At the next return of the comet to perihelion, it was not likely that astronomers would obtain a view of it; for, on account of the odd half-year in its period, it came to perihelion when the earth held a point in her orbit exactly opposite to that which she had occupied at the comet's former perihelion passage; therefore, the comet, which before was favourably, was now unfavourably situated for observation.

As the period for the comet's second return approached, astronomers looked out eagerly for its advent. Again and again the heavens were 'swept' for the faint speck of nebulous light which should have announced the return of the wanderer. But days, and weeks, and months passed, until it became certain that either the comet had been shorn of nearly all its former brilliancy, and had thus escaped unnoticed, or that something had happened to deflect it from its course.

The last alternative appeared so much the more probable one, that mathematicians began to examine the path of the comet, to see whether it had approached so near to any disturbing body as to have been driven from its recently adopted orbit. The examination was soon rewarded with success. If we consider the nature of orbital motion, we shall at once see that, so long as Lexell's comet was subjected to no new disturbing attractions, it was compelled, once in every revolution, to return to the scene of its former encounter with the planet Jupiter. This return was fraught with danger to the stability of the comet's motions. So long as Jupiter was not near that particular part of his orbit at which the encounter had taken place, the comet was free to pass the point of danger, and return towards the sun; but if ever it should happen that Jupiter was close at hand when the comet approached his orbit, then the comet would be as liable to have its motions disarranged as at the original encounter. It happened that the period of the comet's motion in its new orbit was almost exactly one-half of Jupiter's period. This was unfortunate; since it clearly follows, that when the comet had revolved *twice*, Jupiter had revolved once around the sun. Thus the comet again encountered the planet, with what exact result has never become known; but certainly with this general result, that the comet's movements were completely disarranged. It has never returned to the neighbourhood of the earth.

We may look upon Lexell's as the first discovered comet of short period; for although it was never seen after its first visit, yet nothing can be more certain than that it did actually return once, and that it went twice round its new orbit. Indeed, if it has not been absorbed by Jupiter—a very unlikely contingency—it must still be revolving in space with an orbit which brings it, once in each revolution, to the scene of its former encounters. The figure of its orbit may be altered again and again by encounters with Jupiter; but each new orbit *must* traverse this dangerous point. This follows directly from the laws of orbital motion around an attracting centre. A body will continue to revolve in any orbit along which it has once begun to move, unless it is acted upon by some extraneous force. Accordingly, if at any point of its path an extraneous force suddenly disturb its motion, the disturbed orbit cannot fail to pass through the point of disturbance. Thus the body may again fall under the influence of the disturbing agent, and be caused to move in yet another orbit through the same point. And in the course of millions of years, a body might thus travel in a hundred different orbits, all passing through a common point. There is, indeed, *one* way in which Lexell's comet might have escaped from Jupiter's control. If, after one of its encounters with Jupiter, it happened to pursue a path which brought it very nearly into contact with Saturn or some other large planet, it might be compelled thenceforth to abandon its allegiance to Jupiter. But the probability of this happening to a comet which had once got into the toils, may be reckoned 'almost at naked nothing.'

We have been careful to dwell on this point for a reason which will appear presently.

The search for Lexell's comet led to the discovery of a considerable number of nebulae; and the discovery of nebulae led in turn to the discovery of another comet of small period. In 1786,

Méchain announced to Messier (who had constructed a list of 103 nebulae) that he had discovered a nebulous object. This turned out to be a telescopic comet. It was again seen by Miss Caroline Herschel in 1795, by Thulis in 1805, and by Pons in 1818. All this time, no suspicion had arisen that these observers had seen the same object. But in 1818, the comet remained in view so long that it became possible to calculate its orbit. This was done by the German mathematician Encke, who found that the orbit is an ellipse, and the period of revolution about three years and four months. He found, after a laborious process of calculation, that it could be no other than the object which had attracted attention in 1786, 1795, and 1805. Encke next applied himself to calculate the next return of the comet, which he did so successfully that astronomers have continued to call by his name the object whose motions he had been the first to interpret.

Encke's comet was seen by one observer only in 1822, as it was not favourably situated for observation in the northern hemisphere—that observer was M. Rümker, who followed the comet for three weeks at the private observatory of Sir T. M. Brisbane, at Paramatta. In 1825, the comet was detected by several independent observers. It was seen again in 1828, being detected by two observers—Harding at Göttingen, and Gambart at Marseille. In 1832 and 1835, it was seen from the observatory at the Cape of Good Hope.

At the next return of the comet, which took place on December 9, it was visible to the naked eye for the first time since its discovery. At this passage, also, a very noteworthy peculiarity was remarked—or rather a peculiarity which had been remarked by Encke in 1818, was now, for the first time, placed beyond a doubt. Encke had suspected that the comet's period was slowly diminishing. Each return to perihelion occurred about two and a half hours before the calculated time. Such a discrepancy may appear very trifling, and, in fact, it might seem that no certainty could be felt respecting it; and this is the case so far as one or two revolutions are concerned. But when each successive revolution shews the same discrepancy, the deficiency soon mounts up to a period respecting which no doubt can be entertained. For example, between the perihelion passage in 1789 and that of 1865, the comet has made twenty-three revolutions, and each has been less than the preceding by two and a half hours (on the average). Hence, the last revolution of the series occupied two days and a half less than the first. But even this does not express the full effect of the change; for the comet having gained two and a half hours in the first revolution, five in the next, seven and a half in the next, and so on—it is the *sum* of all these gains (and not the gain made in the last revolution) which expresses the total gain of the comet in point of time. Hence the last perihelion passage occurred twenty-nine days before the time at which it would have taken place, but for some unknown cause which has interfered with the comet's motion. What that cause may be, has not yet been certainly determined; but it is at least highly probable that Encke has assigned the true cause in suggesting that so light a substance as the comet may be retarded in its passage through the interplanetary spaces by the existence of 'a thin ethereal medium,' incapable of perceptibly retarding the motion of the planets.

At first sight, it may seem strange that we should speak of the *acceleration* of the comet as being caused by the *retarding* influence of such a medium as has been conceived to occupy the interplanetary spaces. Yet, it is strictly the case that, if a planet or comet be continually checked in its onward course, its velocity will continually grow greater and greater. For instance, if our earth were so checked, it would move in a spiral which would gradually bring its orbit to that of Venus, by which time its motion would be as rapid as that of Venus (which moves one-third faster than the earth); then it would continue revolving in a spiral till it reached the orbit of Mercury, when it would be moving as fast as this the swiftest of all the planets. And so the earth would continue to approach the sun with continually increasing velocity.

Returning to Encke's comet, we have to notice yet another important discovery which was effected by its means. The comet passed so near to Mercury in 1835 as to enable astronomers to form a much more satisfactory estimate of this planet's mass than had hitherto been obtained. It was found that the mass of Mercury had been largely overestimated by astronomers.

No very long interval passed after the discovery of Encke's comet before another comet of short period was detected. M. Pons, who had discovered Encke's comet, it will be remembered, in 1818, observed a faint nebulous object on June 12, 1819. This object turned out to be a comet; and in this case, as in the former, Encke calculated the stranger's orbit and period. He found that it moves in an ellipse which extends slightly beyond the orbit of Jupiter, and that it has a period of about five and a half years. This object was not seen again, however, until the year 1858, when M. Winnecke discovered it, and at first supposed it to be a new comet. Calculation soon shewed the identity of the two objects, and confirmed the results which had been obtained by Encke in 1819.

The next comet of short period was discovered by M. Biela in 1826. Perhaps nothing in the whole history of cometic observation is more surprising than what has been recorded of this singular object. We must premise that the comet had been seen in March 1772, and again in November 1805. But it was not until its re-discovery in 1826, that its orbit and period were computed. An ellipse of moderate eccentricity, extending just beyond the orbit of Jupiter, was assigned as the comet's orbit—the period of revolution being about six and a half years. The orbit was found to pass within about twenty thousand miles of the earth's orbit; and at the first return of the comet (in 1832), some alarm was experienced lest the near approach of the two bodies should lead to mischief of some sort. The comet returned again in 1839 and 1845. It was at the last-mentioned return that a singular phenomenon occurred, which is unique, so far as we know, in the history of comets. On the 19th of December 1845, Hind noticed a certain protuberance on the comet's northern edge. Ten days later, observers in North America noticed that the comet had separated into two distinct comets, similar in form, and each having a nucleus, a coma, and a tail. European observers did not recognise the bi-partition of the comet until the middle of January 1846. The new and smaller comet appears to have sprung into existence from the protuberance observed by Hind, since this

object moved towards the north of the other. After a while, the new comet became the brighter, but, shortly after, it resumed its original relative brilliancy. Lieutenant Maury noticed, on one occasion, a faint 'bridge-like connection' between the two comets. The distance between them gradually increased, until first the new comet, and then the old one, had passed out of view.

In 1852, Biela's comet was again seen, and the Padre Secchi, at Rome, detected a faint comet preceding it. If, as is probable, this faint comet is the companion, we may assume that the two bodies are permanently separated.

At the two next returns, the comet was not seen, and much interest was felt by astronomers respecting the anticipated return in January 1866. It was searched for systematically at the principal European observatories. In fact, so closely did Father Secchi examine the calculated track of the comet, that he detected several new nebulae in that region. But the comet itself was not found. Astronomers are unable to assign any satisfactory reasons for its disappearance. It is known to have traversed the zone of the November meteors where that zone is richest—our readers will remember the display of shooting-stars in 1866—and Sir J. Herschel surmises that it may have been destroyed in the encounter. Possibly this may be the true solution of the difficulty; or, it may be that the comet was merely dispersed for a while during the passage of the meteor-zone, and may yet gather itself together and become visible to astronomers.

We pass over three or four comets belonging to this class which present no special features of interest, to come to an object which has recently been rediscovered, and will continue visible (in good telescopes) for several weeks. On February 26, 1846, M. Brorsen discovered a telescopic comet, whose motions soon shewed it to belong to the class of objects we are now dealing with. It was found to have an orbit of moderate eccentricity, extending just beyond Jupiter's orbit, and a period of about five and a half years. It was not seen at its next return to perihelion; but was rediscovered by M. Bruhns on March 18, 1857. In 1862, it again escaped undetected; but at its present return, it has been rediscovered (by three observers simultaneously), and it is now being carefully tracked across the northern skies.

In all, there have been recognised thirteen comets of short period—that is, having periods of less than seven years. Amongst these are included several which have only been seen once, and some which are known to have been subjected to such disturbance as no longer to travel in orbits of short period. Of these thirteen comets, no less than ten have the aphelia of their orbits just beyond the orbit of the planet Jupiter; two have their aphelia just within Jupiter's orbit; and Encke's comet alone has its aphelion at a safe distance from that orbit. It appears to us that the peculiarity thus exhibited is not without meaning. Remembering the history of Lexell's comet, we seem to find a satisfactory explanation of the peculiarity. We have seen how Lexell's comet was first introduced into the system of short-period comets by the giant planet Jupiter, and then summarily dismissed. So long as the comet remained within that system, the aphelion of its orbit lay just beyond the orbit of Jupiter, and this would be the case with any comet introduced in a similar manner. But for the coincidence which led to its expulsion, Lexell's comet

would have continued to revolve as a short-period comet. It seems also clear, that in the course of many ages, its period and orbit would have grown gradually smaller, through the operation of the same cause (whatever that may be) which is now reducing the period and orbit of Encke's comet. At length it must have attained a path safe within the orbit of the great disturbing planet. In the list of short-period comets, then, we seem to see illustrations of the successive stages through which Lexell's comet would have passed in attaining the sort of orbit in which Encke's comet is now moving. And it seems permissible to assume that all the short-period comets have been introduced to their present position within the solar system by the same cause which led to the temporary appearance of Lexell's comet as a comet of short period—that is, by the attractive energy of the planet Jupiter.

BLONDEL PARVA.

CHAPTER XIV.—THE FLICKER OF THE CANDLE.

AMONG the many questions which neither priests nor philosophers can answer, there is this one: Why so often is poor humanity permitted to linger on its last couch, shorn of all attributes that elevate it above the beasts, nay, sunk below them, a senseless, yet dwindling log? Vitality indeed it has, since it does not decay; but life it has not, only lethargy, that sooner or later will be exchanged for death. Why this uneasy slumber on the chair as the night draws on, when the bed—our proper resting-place—awaits us, and since to bed we must go at last? If there is any faculty of sensation left, it is the dim perceptibility of pain—discomfort; if any ability to think, it is the vague and kaleidoscopic memory of bygone things; but usually 'He feels no pain, he knows nothing of what is passing about him,' is the doctor's verdict, and we, the watchers, are glad to think it is so. It must surely be for our sakes that he lies thus—careless of love and hate, unproductive, useless, a clog upon the wheels of others' time—yet the object of loving vigilance, of unselfish endeavour. For days and days thus Robert Irby lay utterly prostrated by the recital recorded in the last chapter; but his iron frame still held the captive life.

Maurice had written to Kate from Liverpool, telling her that all was safe, and she had besought him, in reply, to come and see her, and tell her all.

But he could not leave his dying patient, and dared not tell her how matters stood. She would be hurrying up to town, he knew, if once she heard her father was still in England and a dying man; and what excuse could be made to her mother, and what suspicion might not such a proceeding arouse in those who were, for all he knew, still keeping watch upon her movements. 'I am engaged,' he wrote, 'in arranging with the insurance companies; but his delay in that matter was of course unintelligible to her, and she chafed under it. 'When I am poor as it becomes me, a music-teacher, a sempstress—I care not what—I shall be content,' she wrote, 'but not till then. Our present prosperity is loathsome to me, and seems nothing less than crime.' This, mingled with passionate apprehensions upon her mother's account (the only hold which Maurice had upon her, and the sole ground on which he besought her patience), was her constant cry.

Now, until Robert Irby was dead, nothing

definite could possibly be arranged with the insurance companies; the unconditional surrender of all Mrs Irby and her daughter possessed would have availed nothing. But although Maurice could not afford to be frank with the secretary, he cultivated his acquaintance; for, as he well knew, though relationship is one of the greatest obstacles to the settlement of business affairs, personal intimacy, on the contrary, smooths the way. The official, on his part, spoke almost as guardedly as Maurice, so that it was difficult for the latter to guess how far he had been put in possession of the facts of the case by Sir Richard; although something, it was certain, he knew, or how could the warrant have been issued on the part of the companies for Irby's arrest?

There came, however, a certain day, when Maurice, having left his charge in the hands of Mrs Gresham for a few hours, looked in upon the secretary, and found him in a state of great perturbation.

'Look here, Glyn, my good fellow,' said he, as soon as he had cautiously closed the glass-door of his sanctum, 'we have known one another at college, and it's deuced disagreeable to have to forget all that, but I must do it. Hitherto, we have been doing our best to arrange a certain matter which has always been nameless, for the mutual benefit of your friends and my employers; but since I saw you last, something has happened: I am not at liberty to tell you what, but which renders their interests diametrically opposite—antagonistic. Do I make myself intelligible to you, Mr Glyn?'

'Yes. It is the chivalry of the duello. "I am about to run you through if I can," is what you mean; "draw, sir; defend yourself."'

'Just so; that's it, Glyn. I must not talk to you any more on this, until all is settled, one way or the other. Good-morning.'

'What on earth has happened? What can it be?' mused Maurice as he walked slowly Clapham-wards, scarcely knowing whither he went.

Mrs Gresham, with uplifted finger, met him at the house-door before he could ring the bell.

'Pray, come up at once, sir,' whispered she. 'The poor gentleman is going at last, I do believe.' 'Thank God!' returned Maurice fervently, thinking of the unknown peril which had just been hinted to him.

'Indeed, sir, it will be a happy release. He has asked for you, and seems to crave for something—not food nor drink—I cannot tell what he wants.'

The sick man was looking more wan and white than ever, but there was speculation in his eyes. They roved about him as though seeking for something, and his fingers opened and shut as though they would have grasped it.

'It is the flicker of the candle, you see, sir,' said the landlady with reference to this last sign.

Maurice bent down and listened beside the twitching lips.

'Katie, Katie!' and the craving of eye and hand were terrible to witness: it was like seeing a man starve to death when one has no food to give him.

'What can he want? What can we get him?' cried the landlady, wringing her hands.

A sudden thought struck Maurice. He took down from the watch-pocket at the bed's head a little jet bracelet, and placed it in the sick man's hand. A satisfied smile lit up the wasted features

as the thin fingers took their burden to the pallid lips.

'Dear heart, if the poor gentleman is not a Roman!' ejaculated the landlady with horror and pity.

And indeed the dying man kissed and mumbled the precious bracelet, exactly as a devotee would treat the relics of his patron saint, or the blessed symbol of his future hope.

There was a sharp and sudden ring at the house-bell.

'That is the bell for saddling,' exclaimed the sick man in low distinct tones. 'I'll take ten to one Pyrrhus wins.'

'Now he's on the race-course!' whispered Mrs Gresham, lifting up her hands. 'Oh, why didn't we send for Mr Whiffles!'

A cab drove up hastily to the door, and the bell was rung more violently than before.

'Now they're off!' cried the sick man, raising himself upon one elbow. 'King Pyrrhus wins.' Then fell back upon the pillow.

The door below was opened, and there was a turmoil in the little hall below. Then heavy footsteps came quickly up the stairs.

'Where is he?' asked a voice in angry tones.

'He is here, Richard Anstey,' answered Maurice sternly.

'I hold a warrant for your apprehension, Mr Irby,' said a tall grave man, following close upon Sir Richard's heels.

Maurice pointed to the bed. Another's warrant had gone forth beforehand, whose jurisdiction extends over the whole world; and a hand stronger than that of the law was laid upon him it sought. It was not King Pyrrhus that had conquered, but King Death. Robert Irby was a dead man.

'I arrest the body,' said the inspector in formal tones. And accordingly he took possession.

CHAPTER XXVI.—'DOWNRIGHT MADNESS, NEPHEW MAURICE.'

Maurice betook himself at once to the insurance-office, but the secretary had gone home. Now, in ordinary cases, there would for the present have been nothing further to be done. The mystery men call 'business' is commonly only celebrated in its own peculiar temples, and at appointed times. Its priests are then in waiting with the expression of countenance suitable to its solemn rites; but after the canonical hours, the mysterious culture ceases. Without the ledger and the pigeon-holes, and the high-stooled clerks on guard in the ante-chamber, it is an impiety to transact affairs. We are getting, it is true, somewhat latitudinarian in this respect, but the process is a slow one. The Yankee (*sagax rerum*, too), with his cigar in his mouth, and lounging in his rocking-chair, is still regarded by the orthodox British man of business as the freethinker is regarded by the ritualist. But since Maurice was personally acquainted with the secretary, the matter in hand could still be pursued, notwithstanding the solemn hour of 4 P.M. had tolled.

'You have got your man,' said Maurice quietly, as soon as he was closeted in the official's study.

'I expected we should,' answered the secretary, without a trace of triumph. 'You were tracked home when you left the office this afternoon. I did all I could for you short of a direct warning; but even if you had been more cautious, it would

have been only a matter of sooner or later. The inspector—the man we have always employed in these cases—felt that his reputation was at stake. What a dance you led him! though, to do him justice, he was not without his suspicions of you all along. I never saw a man so put out as when he arrived from Liverpool two days ago.

‘Two days? Two weeks, you mean.’

‘No, I don’t. Is it possible you are not aware that he—or rather some person who is equally interested with ourselves in the capture of this Irby—chartered a steamer, and went in pursuit of the *Aphrodite*?’

‘Bless my soul!’ ejaculated Maurice.

‘They did not do *that*,’ returned the secretary, ‘I do assure you, but quite the reverse. They had the most infamous weather, and were sea-sick day and night. Our poor inspector is still green. However, they came up with the chase at last, and went on board. In the list of passengers, there was the invalid Martin, of whom they were in search. They went down into his cabin—and lo, he was not their man after all! The inspector had had to do with him, it seems, under the name of Jones in other matters, but he was in no way connected with this one. Imagine the voyage home of our trusty detective, and the feelings which he entertains towards you and your— I mean the gentleman he’s caught to-day.’

‘It’s not much of a catch, Mr Secretary. The man of whom you speak—Robert Irby—is dead.’

‘Dead!—Nay,’ continued the other with a smile, ‘the company will be a little suspicious about that. You see he has died once already—ten years ago—when his funeral expenses cost us alone five thousand pounds.’

‘However, he is dead now, for certain, as your own people will inform you,’ proceeded Maurice; ‘they are indeed in possession of the body. Now, I came to you before the next board-day—which I understand is to-morrow—in order that you may place before the directors the actual state of the case. I do not deny (although, remember, it has still to be *done*) that the identification of this man Irby may be established in due course, and that you may recover the whole of the property of which his innocent widow and daughter are possessed.’

The secretary smiled.

‘They are as innocent as you are yourself, I give you my solemn word and honour. The widow is to this day utterly ignorant that her husband was not drowned. The daughter is above all things desirous to give up all they have, unreservedly and at once. She could not do it—I myself would not permit it—when the doing so would have necessitated the public exposure of her father’s guilt. But now—’

‘My dear Glyn,’ returned the secretary impressively, ‘I know what you are about to urge; but it is too late. The board is naturally indignant—some members of it are furious—at the fraud which has been so successfully practised upon us: they will, I am sure, insist upon punishment—as far as shame can punish—as well as restitution.’

‘What! the punishment of the innocent?’

‘They have a public duty to perform, my dear sir, and they will do it; and even if they would not, there are two other companies who have been imposed upon in a similar shameful manner. I honestly tell you that not even the immediate and unconditional restitution of what little those

unfortunate ladies may be possessed of will avail to stay criminal proceedings.’

‘I did not know companies were so public-spirited as to gratify their sense of duty at so great a cost,’ said Maurice rising.

‘Cost! my dear sir,’ returned the secretary: ‘the difference of expense between these poor folks giving up possession and our taking it, is not worth consideration.’

‘I was not alluding to that,’ said Maurice carelessly, ‘but to your reckless disregard of your own interests; but if the board of directors are inexorably resolved upon their course of action, there is nothing to be said.’

‘Our own interests? My dear sir, I don’t understand you.’

‘Because I have not explained. What I was about to say was this: By taking the course you propose, instituting criminal proceedings, and bringing public shame upon these unfortunate persons, you will acquire, say five thousand pounds. That is the sum-total of their property.’

‘Just so. The united companies will even then have lost, including the interest of the sum of which they were originally defrauded, at least fifteen thousand pounds.’

‘But if a friend of the family should offer to pay another five thousand pounds—I mention the extreme limit to which his means extend—on the proviso that the proceedings are not made public, I say if the entire ten thousand pounds should be paid up within three months, what would the united companies say *then*? Mind, the name of Irby is never to appear in print: it need not even be mentioned in the discussion at all; and if the matter gets wind, I at once withdraw my offer.—Come, consider. Vengeance is sweet to flesh and blood; but in the case of a board—of *three* boards—don’t you think that five thousand pounds would be sweeter?’

‘It is a delicate matter,’ said the secretary musing. ‘It has always been our practice to act from a sense of public duty.’

‘Five thousand pounds is a large sum,’ observed Maurice quietly, as he took up his hat.

‘I will lay your proposition, in cautious terms, before the board, Mr Glyn. If the man were alive, it would be compounding a felony; and I must say even now, it’s uncommonly like offering us hush-money. Good-bye, sir.’

‘It was fortunate that I called upon my friend before the directors met,’ mused Maurice, as he left the house, well pleased. ‘To-morrow would perhaps have been too late for compromise. Supposing they accept the terms, there is still that scoundrel, Sir Richard, to be dealt with. It is scarce possible, however, that he will dare shew his malice so openly as to brand his own kith and kin with guilt, if the companies are content to keep silence. If he does, there is still his destruction of the will to work with. *Mens sibi conscia*—No; that’s not it. A mind conscious of ill-doing can afford to despise no menace. I wonder what was in that will—what the villain gained by burning it!’ Here the association of ideas carried his thoughts into another channel. ‘Poor Aunt Rachel! I hope it is not permitted her to know that all her frugal savings are destined for the maw of an insurance company! “Downright madness, Nephew Maurice!” How well I can fancy the good old soul clasping her mittens and saying that! Kate must never know about it: it

must be kept from her as strictly as the knowledge of her husband's crime must be kept from her mother—a far more difficult matter. "Don't tell Susan," said poor Irby. Whatever a man does, I suppose he trusts his wife may still think well of him; or if that is impossible, he trusts she may never know his misdeeds. Doubtless, now, Madam has a picture of this man in her heart, made up of all the pleasant features of the original; a hearty, high-spirited, open-handed man, who, though a trifle self-willed, has a sound heart. Well, God willing, she shall carry it to her grave.—Five thousand pounds! That will leave me about five hundred to begin the world with; quite a fortune at my age. I must work a little harder, that's all!

ACROSS THE WALNUTS AND THE WINE.

In after-dinner talk
Across the walnuts and the wine.—Tennyson.

THERE is great complaint among the aristocratic frequenters of 'the Sunday Zoological' that members' tickets are often bestowed on persons not in the Upper Ten Thousand, a practice which, if persisted in, will necessitate some other means to be devised by the latter for breaking the Sabbath agreeably. Mr Funnidog narrated an illustration of this which happened to come under his personal observation. Two elderly ladies, without chignons, and with crinolines (a double offence in the eyes of fashion), were contemplating one of the family of the *Falconidae*.

"There's a great howl for you!" said one.

It was not an owl, and of course it was not for her.

"Get along with you, stoopid!" rejoined the other; "that's not a howl, that's a heagle."

The controversy growing warm between them—"Ladies," interposed one of the officers of the Society (as in the fable of the Chameleon), "you need not quarrel, for you are both in the wrong. It is neither a howl nor a heagle; the bird before you is an Ork."

"I remember a curious application of that last term in Yorkshire," observed Housewife. "I was staying at a certain great house in that county, when the clergyman of the place happened to call. The conversation turning upon local topics, the park and its timber, the preservation of game, &c. the visitor observed to my host: "By the by, I saw a very fine ork just inside your lodge-gates."

"Ah, indeed," said the proprietor.

"You take it very coolly," remarked I, "considering what a fanatic you are about preserving your birds; a hawk must surely be as bad as any human poacher."

"Nay," said the clergyman; "I don't mean a hawk, sir; I mean an ork tree."

Of course we have often talked over the Abyssinian war; but while all was conjecture, I have forborne to tell how we settled the matter. The colonel used to say: 'Take my word for it, that fellow Theodore will make a good fight yet: he has lots of stuff in him.'

'So have all scarecrows,' would answer Bitter Aloes. 'What he will do, you may take your oath, is to massacre all his prisoners, and retire into the recesses of his kingdom.'

We knew the value of such confident opinions now, and some of us were commenting upon them

the other night with all due contempt consistent with the presence of their respective originators.

'And yet,' said Housewife, to whom some good fairy at his christening gave a great slice of common-sense, in the absence of all gifts of brilliancy, 'I don't think we should blame people for their want of prescience, so much as for their folly after the event. This butcher Theodore, who tortured thousands of human beings, and slew women and children with his own hand from sheer thirst for blood, has now become quite a hero with us, for no reason whatever except that he committed suicide—which in natives of this country at least is considered to be a very cowardly action. The undergraduates at the Oxford commemoration could not cheer the pious memory of the deceased monarch sufficiently. We are going to send his son to that university, out of respect to his lamented father. No wickedness is too revolting, it seems, to forbid our admiration, if only it is exhibited in persons sufficiently conspicuous.'

'But suppose he had murdered the European captives, as well as the men, women, and children of his own nation?' observed Mr Smooth Smiler, wishing to be conciliatory. 'He might have done that, you know.'

'In that case, we should not perhaps have adopted his son,' returned Housewife, 'but he himself would have been scarcely more of a villain. You are like that jury of Frenchmen who found "extenuating circumstances" in the case of one who had murdered his mother and four sisters, in the fact of his having resisted the temptation to murder his grandmother also.'

'Nay, my good friend,' said Parson Grey (a fine specimen of the intelligent town divine, and one who has no features in common with that 'portrait of a benefited clergyman,' as given by the radical journals); 'you cannot expect popular opinion to be either rational or philosophical, and yet, upon the whole, we find it wholesome. King Theodore was our vanquished enemy, and is dead; we do not wish to remember that he was a cruel and blood-thirsty savage; and we have no quarrel with his little son. At the worst, we are indulging in a little foolish sentiment; that's all. Public opinion is sure to be right in the end, bless you. I was at that Oxford commemoration myself, and the scene reminded me so of what happened in '34 there—when the Duke of Wellington was made Chancellor—that I could have shut my eyes and fancied myself once more an undergraduate. It was the date of the famous Appropriation Clause, and the Irish Church Bill was the question of the day, as it is now. You should have heard how its promoters were hissed! The toast of "the Admission of the Dissenters" was followed by a long-protracted snuffle, and an ejaculation of "Amen!" in imitation of the supposed twang of the conventicle; any notion of making friends with foreigners was not to be listened to in those days, and "Our French Alliance" called forth three rounds of groans. Yet it is those very young gentlemen who, in riper years, have carried a democratic Reform Bill.'

'Nevertheless,' observed Mr Bitter Aloes, 'I do think there should be an Oxford professorship founded to teach its youth how to swallow opinions decently; they do make such terrible faces over the operation.'

'You may swallow worse things than opinions, Mr Aloes,' said the parson good-naturedly. 'I was

calling this morning on a certain well-known gem collector, who was so good as to shew to me the contents of his cabinet. After the first half-dozen specimens, my attention began to wander; for a very little of that sort of thing goes a great way with me. "What is that little bottle you keep among your gems?" inquired I.

"That is my Queen Eleanor's Mixture," said he laughing. "But for it, I should not be in possession of yonder ruby, the value of which is over a thousand pounds."

"What?" cried I. "Do you mean to say it is artificial? I thought that that notion of manufacturing gems was a popular superstition."

"So it is, parson," said he; "but, nevertheless, I am indebted to the mixture for that ruby. The fact is this: my collection is too well known by half. I don't mind shewing it to an old friend like you, and of course I am proud of all these things; but I have, in a general way, to keep too sharp an eye upon my visitors to make the exhibition pleasant. People whom I know nothing about call upon me, and present a card of some friend of mine, and say: 'Mr So-and-so assured me you would be so kind as to let me see your gems.' Two men came together upon one occasion with the purpose (as afterwards appeared) of what they called 'putting the jug' on me—that means garrotte and robbery; but I did not like their looks, and declined to shew them anything without a letter of introduction. They had, as it afterwards turned out, stolen the card of a Professor of Mineralogy. I am not, however, afraid of a single visitor, because I always keep *this* handy"—and my friend produced a pretty little pistol, cocked, and, I have no doubt, loaded.

"But the bottle," said I; "what is the use of that?"

"That is the supplement to the pistol. Thus, only yesterday, a very ill-looking fellow—a foreigner, all hair and false jewellery; and a very foolish thing of him it was to come to me with paste-diamonds in his shirt-front—brought a letter of introduction with him from a friend of mine at Dresden. The letter was genuine; but I had my doubts, from the first, as to whether this was the gentleman to whom it referred. However, I brought him in here, and shewed him the gems. He made some very commonplace observations, which convinced me he knew nothing of the subject, and after thanking me, in a somewhat servile manner, for my courtesy, took up his hat to go. I slipped between him and the door, and locked it in a second. 'My ruby,' said I, 'if you please, or you're a dead man.' And I put the pistol to his forehead. That little stone, which I have said is valued at above a thousand pounds, was missing. Instead of being indignant, my gentleman merely answered: 'Indeed, you are mistaken, sir. You may call your servant, and examine every pocket.'

'I know that, you scoundrel,' returned I. 'You have swallowed that ruby; now drink this, or die.' I held the weapon in one hand, and the mixture, which is an emetic, in the other. The situation was very disagreeable for him, I have no doubt, but did not seem to be at all embarrassing. He shrank from the pistol (or at least the police station, which was its alternative), and took the physic like a lamb, while I stood over him with the Weapon and the Bowl (that little white basin yonder), exactly as Queen Eleanor stood over Fair Rosamond. That's why I call it Eleanor's Mixture:

a decoction without which no gem-cabinet, of any value, can be pronounced complete. When I miss a specimen, I always know at once that some visitor has swallowed it, and then, you know, he has to swallow *this*."

'And I call that worse than swallowing opinions, Mr Bitter Aloes,' concluded Parson Grey.

THE MONTH:

SCIENCE AND ARTS.

HOLIDAY-TIME has come once more, and philosophers and naturalists, artists and legislators, are dispersing themselves to all parts of the kingdom, and many parts of Europe, in search of repose and recreation. The hot and dry summer, however, made many question as to whether it would be possible to go anywhere within the four seas and escape dust; and some who had sojourned at the antipodes declared that England, in 1868, was as dusty as Australia, and they hinted that our climate must be changing. What will they say to the fact, that in some parts of the south of France not a drop of rain fell between May 1867 and May of the present year! On the other hand, while England was thirsting, rain fell so heavily in the north of Scotland that the Spey was in flood; and across the Atlantic, in the United States, they have had a drenching summer, with seventeen days of continuous rain. Here are facts which the Meteorological Office will have to take a note of in working out a theory of the weather.

The long-talked-of demolitions at Burlington House have now actually begun, and ere long the two wings, the front wall, and the famous colonnade which at present adorns the courtyard, will be cleared away. Their place is to be occupied by a stately building sixty feet in height on three sides of the spacious court, the front looking into Piccadilly; and the present main building, which is eventually to be handed over to the Royal Academy, will be made to correspond in height with the new structure, whereby a handsome quadrangle will be formed. When completed, it will be occupied by the Royal, the Chemical, the Linnæan, the Geological, and the Astronomical Societies, and the Society of Antiquaries. The last three are at present lodged in Somerset House.

Dr Frankland, in his lecture at the Royal Institution on the Water-supply of the Metropolis, stated that every glass of Thames water drunk in London contains a tea-spoonful of sewage; and side by side with a jar of this impure water, he shewed jars of bright pure water brought from Wales and Cumberland. Projects for bringing water in a long aqueduct from those distant places have been made public, and great would be the advantage to Londoners if either of them could be realised. Mr Simon, the Health Officer of the Privy Council, declares, in his Report on Cholera, that the diffusion of that cruel malady among us depends entirely on the filthy facilities which are suffered to exist, especially in our large towns, for the fouling of earth, air, and water.

'Cholera,' writes Mr Simon, in an emphatic passage, which we quote, as deserving the most serious consideration, 'ravaging here at long intervals, is not Nature's only retribution for our neglect in such matters as are in question. Typhoid fever, and much endemic diarrhoea, are incessant witnesses to the same deleterious influence: typhoid fever, which annually kills some fifteen thousand to twenty thousand of our population; and diarrhoea, which kills many thousands besides. The mere quantity of this wasted life is something horrible to contemplate, and the mode in which the waste is caused is surely nothing less than shameful. It is to be hoped that, as the education of the country advances, this sort of thing will come to an end; that so much preventable death will not always be accepted as a fate; that for a population to be thus poisoned by its own excrement, will some day be deemed ignominious and intolerable.'

An instrument has been invented in Paris which combines two copper tubes, a flame, a whistle, and a small galvanic battery. When the whistle is blown, an effect is produced on the flame which affects the battery, and communicates a signal by the ringing of a small bell. With this instrument, says the inventor, every cry of a child in its cradle may be made known to its parents or nurse in an adjoining room; a thief trying to pick a lock would betray himself by the same means; and by taking advantage of the propagation of sound in water, a modification of the instrument might be constructed, by which a ship would announce its own approach. If the latter could be accomplished, it would be invaluable at night or during thick fogs. To say the least of it, there is something ingenious in the notion that one ship should thus be able to tell another to get out of the way.

By a course of experiments, M. Vial shews that to burn a gas of pure hydrogen instead of the carburetted hydrogen now in common use would be attended by great economy, and be less obnoxious to health. In the manufacture of gas, the larger part of the hydrogen is left behind in the waste: this he would extract, and turn to profit; and to intensify the flame, he fixes a piece of platinum or lime in the burner, by which a dazzling light is produced. Another advantage is, that as the gas contains no impurities, it can be burned without chimneys or contrivances for carrying off the products of combustion, and the air is not vitiated. Moreover, pure hydrogen does not destroy the pipes, as common gas does; and if, as has been objected, it has no smell, and therefore would not betray an escape, the answer is, that it would be possible to charge it with an agreeable scent, and that it is not explosive, as common gas is.

A newly contrived electric gas-lighter is worth notice, for it is always in place and ready for action. A small brass vase lined with silk, in which a plug of vulcanite is fitted, is insulated on the gas-bracket above the burner. From this vase, a wire leads to the burner. By moving the plug about, electricity is produced by friction with the

silk, the vase remains permanently charged, and at pleasure, by merely lifting the plug, a spark is made to travel down the wire and light the gas at the burner. It is stated that a large lecture-room can be lighted up quicker by this means than in any other way.

A railway suspension-bridge is to be built across the Hudson River at Peekskill, in the hilly region known to New Yorkers as the Highlands—which is to have a clear span of sixteen hundred feet, at a height of one hundred and fifty-five feet above high-water. By this bridge, Connecticut will be joined to the great Erie Railway. And there is a project before the legislature of New Jersey for laying wooden tubes underground, through which the mails and small parcels are to be forwarded at a rate of one hundred and fifty miles an hour. Through a similar tube, six feet in diameter, laid under the East and Hudson rivers, passengers are to be transported from Brooklyn to Jersey City.

At the last annual meeting of the Royal Cornwall Polytechnic Society, eight boring-machines were exhibited, some of which excavate a tunnel through hard rock with remarkable speed. One of the eight bored a hole six feet high, five feet wide, and seven feet six inches into the rock in six days; being three times as much as could have been executed by hand in the same time. Another machine works its way into the rock by chipping, not by boring, and penetrates seven feet six inches in nineteen and a half hours, and will open a passage through the rock which Cornish miners call 'killas,' at the rate of ten fathoms a day. With such machines as these, the labour of mining, and, indeed, of all kinds of tunnelling, will be greatly facilitated.

At the same meeting was exhibited Jordan's patent combination steam-boiler, which is constructed of iron or steel tubes, nine inches in diameter, set vertically between two walls. Each tube is of sufficient size to yield one horse-power, and is a complete boiler in itself, yet may be combined with as many others as are requisite to form a boiler of any given power. There are no rivets; but bolts are used to connect the tubes with each other. This system offers advantages: steam can be got up more rapidly, and more water evaporated with a given weight of fuel than by any other boiler. The fuel may be coal, wood, or gas; and a machine of fifty horse-power could be unloaded from a railway truck, and set up in its place, by three men without the aid of a crane.

The Second Annual Report by Mr Buckland, Inspector of Salmon Fisheries, has been published by order of parliament, and will prove of great value to all who take interest in what may be regarded as a national question—a question of food for the people. Twenty-four rivers, from the Dee to the Ribble, and from the Exe to the Tyne, are noticed in the Report, and it is very satisfactory to read that the English and Welsh fisheries are on the increase. Mr Buckland goes thoroughly into the subject, and shews what has yet to be done in

order to make fish plentiful and cheap. One fact is clear—namely, more pains must be taken to prevent the fouling of rivers, if they are to become well stocked with salmon; and another is, that a stop must be put to the diverting of water, whereby many rivers have been so reduced that they flow after heavy rains only. The Report states that more than two hundred prosecutions have taken place for breaches of the Fishery Act; and it recommends that the rural police and the coast-guard should be employed so far as their other duties permit, in preserving the rivers. The Billingsgate Market Committee have forbidden the selling of 'unseasonable salmon;' so we may hope there will be less temptation for poachers than in former years, and that the fish will be allowed to breed unmolested.

The British Association are making preparations for their annual meeting, which is to be held at Norwich next month (August). Besides the ordinary business of the meeting, popular lectures on scientific subjects are to be given by Professors Tyndall and Huxley. Professor Adams of Cambridge (the discoverer of the planet Neptune) is to be the President for the ensuing year: hence, astronomers may prepare themselves for an address which shall particularise the progress of their favourite science. Meantime, Dr Hooker, the President for this year, will, in his address, tell us of the discoveries and advances made in botany and its allied sciences.

THE PLEIADES.

HAIL, ye celestial Seven,
Keeping bright guard
Before the gates of Heaven,
Gates of eternal azure, myriad-starred!

How radiant ye must be
Seen face to face,
Through yon infinity,
To shine so far with such resplendent grace;

Whom knowledge cannot reach!
Like thoughts of power
Beyond the grasp of speech,
Ye stamp with mystery night's silent hour.

The lark that meets the morn
On the sweet wind
Of his own music borne,
Like glorious triumph laughing through the mind,

E'en when his thirst he slakes
At noon's high springs,
And sweetlier singing shakes
Heaven's light in dewdrops from his lucid wings,

Cannot approach your sky,
Nor make it give
Echoes to the glad cry
Of harmonies that ever in him live.

No sun-aspiring wing
Hath e'er attained
To that most distant ring
Wherein ye Seven have for ever reigned.

Or is she lost, who graced
The seventh throne?
And what great sin erased
The nightly splendour of her starry zone?

As the old legends tell,
Doth she now wail
The love, by which she fell,
In glen, or forest dropped with primrose pale?

And do we hear the tones
Of her low plaint
Borne with the wind that moans
Through the dark bowers when twilight groweth faint?

Ah, no; though sweet it were
To think of this,
That shapes divine and fair
For human love should stoop from their high bliss.

No Faun or Naiad now
Keeps the green dell,
Or wanders near the brow
Of mountain, and by silver-dropping well.

That ancient tale now seems
An old-world song,
Romance's earliest dreams,
A thought of childhood worldlier thoughts among.

Far, silent Pleiades,
Your soul-shed light
Must chill Truth thus freeze,
And quench those eyes that gaze so sweet and bright?

When chariots of fire
From world to world
Wheel through all skies, nor tire
The sail of Man on heavenly seas unfurled,

When Earth shall cease to be
A lonely isle,
And her free progeny
Can pass by angel's globe and starry pile,

Young hearts may want no more
The sympathy
They thought your bright look wore,
And struck with awe alone go swiftly by;

Till those great ages live,
Ye shall be stars
That peace and healing give,
When saddened souls are sick with strife and human jars.

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